



REMARKS/ARGUMENT

In the most recent Office Action, claims 1-13 and 20-22 were examined. Claims 1-13 and 20-22 stand rejected. Claims 2 and 7 are canceled from the application. Claim 4 is amended. No new matter is added.

Claim Objections

Claims 2, 4 and 7 are objected to in the Office Action for containing informalities. Claims 2 and 7 are canceled from the application, thereby rendering their objection moot. Claim 4 is amended to substitute a comma for a semicolon. Accordingly, the amendments to claim 4 do not change the scope of the claims, and are not made for any reason related to patentability, but merely to improve the clarity of the claims. Applicant respectfully believes that the objection to claim 4 is now overcome, and requests that the objection be reconsidered and withdrawn.

Claim Rejections - 35 U.S.C. §103

Claims 1-13 and 20-22 are rejected under 35 U.S.C. §103(a) as being obvious over Floyd et al. (U.S. Patent No. 6,090,716). In particular, the Office Action states that it would have been well within the ordinary skill in the art at the time the invention was made to make the MOSFET device of Floyd et al. with the polarity being reversed. The rejection is respectfully traversed.

Applicant first notes that the present invention recited in claim 1 is for a novel structure that obtains unexpected results. As stated in the specification, the structure of the MOSgated device permits the use of a lower gate voltage with a lower $R_{DS(on)}$ by virtue of being a P-channel trench type MOSFET (page 7, lines 4-9). Additionally, the uniform, low concentration of the material in the channel permits a reduced threshold voltage, and allows the device to fully turn on with a voltage of about 2.5 volts (page 7, line 29 - page 8, line 4). The clear evidence of these unexpected results are shown in the table at the bottom of page 4 of the specification, in which it is shown that both the $R_{DS(on)}$ and the threshold voltage for the novel device are greatly reduced over devices lacking the novel structure. Accordingly, applicant respectfully submits that they

have provided objective evidence of unexpected results which must be considered by the Examiner in any evaluation of obviousness. M.P.E.P. §2141.

Indeed, according to the disclosure by Floyd et al., reduced on resistance and threshold voltage are highly desirable qualities in a MOSFET, although not often compatible with blocking capability. Column 1, lines 16-42. However, the disclosure by Floyd et al., and all other cited prior art references, fail to disclose or suggest the advantages obtained in the present invention. Accordingly, even if the assertion in the Office Action that a MOSFET design which works under one polarity type is normally also workable under the reverse polarity were taken as generally true, there is no disclosure of the present structure recited in claim 1 and the tremendous advantages obtained by that structure. As stated in 35 U.S.C. §103, it is necessary to determine whether the differences between the subject matter of the claims and the cited prior art:

“ . . . are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains . . . ”

As the Supreme Court stated in Graham v. John Deere Co., 383 U.S. 1 (1966):

“differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.”

As the court noted in *Graham*, the reversal of components of a known device can lead to a conclusion of non-obviousness when the scope and content of the prior art is properly determined. Because the present structure recited in claim 1 produces a much better than expected result than if the polarity of a device disclosed by Floyd et al. were simply reversed, applicant respectfully submits that they have provided clear evidence of non-obviousness that

must be considered by the Examiner. Applicant therefore believes that the rejection of claims 1, 4 and 9 under 37 U.S.C. §103(a) is overcome, and respectfully requests that it be reconsidered and withdrawn.

Claims 3, 5-6, 8, 10-13 and 20-22 depend upon and further limit independent claims 1, 4 and 9, respectively. Because the dependent claims include all the limitations and subject matter of the independent base claims, applicant respectfully submits that the dependent claims should be allowable as well, and further in view of the additional limitations recited in each claim. Accordingly, applicant respectfully requests that the rejection of claims 3, 5-6, 8, 10-13 and 20-22 under 35 U.S.C. §103(a) be reconsidered and withdrawn.

Conclusion

Applicant respectfully believes that the foregoing is a complete response to all issues raised in the most recent Office Action. In view of the above amendments and discussion, applicant respectfully believes that the present application is now in condition for allowance, and earnestly solicits notice to that effect. If it is believed that an interview would contribute to allowance of the claims, the Examiner is requested to contact the undersigned counsel at the number provided below.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Asst. Commissioner for Patents, Washington, D.C. 20231, on November 14, 2001:

Brendan J. Kennedy
Name of applicant, assignee or
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Brendan J. Kennedy
Signature

November 14, 2001
Date of Signature

Respectfully submitted,

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